

## Smart About Salt Operator Training Program

### Program Length

The training session, including the in-class exam, is one day. We start at 8:30 a.m. and finish by 4:30 p.m. We will take a break for lunch, which is included.

### Curriculum

We will cover the following topics:

**1. Smart About Salt Overview**

This module introduces the day and explains the Smart About Salt Program and its requirements.

**2. The Environmental Effects of Salt**

This module explains the effects of excessive salt on soil, vegetation, surface water and its biota, wildlife, and groundwater. It explains Environment Canada's concerns and actions to improve salt management and introduces the principles of the 5 Rs of salt management.

**3. Weather**

This module covers the sources of weather forecasts, how to interpret forecasts, the difference between air/pavement/dew point temperatures, how to monitor weather conditions to help make snow and ice control decisions, and how to know when a forecast is wrong and what to do about it.

**4. Principles of Ice Formation**

This module explains how ice forms and explains the principles of dew point as it relates to frost and black ice. It also covers snow drifting and snow drift management, the importance of water management at facilities and the importance of pavement temperatures to snow and ice control decision-making

**5. Mechanical Snow Removal**

This module highlights the importance of plowing and shovelling, and examines features of available equipment.

**6. Salt Science**

This module explains why and how salt works, what is a freeze point depressant, why we use salt, the phase diagram, the importance of brine, and the importance of proactive snow and ice control.

**7. The 5Rs of Salt Management**

This module discusses the role of mechanical removal, the role of chemicals, what materials to use when, the 5 Rs of salt management, anti-icing, pre-treating, pre-wetting, direct liquid application, and the production and use of liquid de-icers.

**8. Liquids**

This module introduces the different liquid products, when and how to use them, how to make your own and how to properly store them.

**9. Calibration**

This module discusses the importance of calibration, how to calibrate equipment, how often to calibrate, and the importance of documentation.

**10. Application Rates**

This module discusses what are reasonable application rates, the importance of multiple rates, how to calculate service areas, how to calculate application rates and how to apply the right amount of salt.

**11. Material Handling & Storage**

This module discusses the problems with poor storage, what are the characteristics of a good storage facility, good and bad salt handling procedures, and the importance of good housekeeping.

**12. Risk Management and Record Keeping**

This module explains where risks come from, the importance of managing risk, how to manage risks, the importance of keeping good records and the Smart About Salt tracking forms.

**13. Site Assessment**

This module introduces methods to identify high-risk areas around your facility and estimate salt requirements for your site.

**14. Putting It All Together**

This module provides a review of key points, explains the steps to a good winter operation, what is involved in getting organized, how to analyze a site, material handling, the key step to fighting a storm, and the importance of record keeping. It reviews a case study.